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(54) Title: NANOPARTICLE FORMULATIONS OF PLATINUM COMPOUNDS

(57) **Abstract:** Solid Lipid Nanoparticles of platinum compounds, particularly of antitumor platinum complexes are disclosed. The Nanoparticles of the invention are obtained by a process comprising: a) preparing a first microemulsion by mixing a molten lipid, a surfactant, and optionally a co-surfactant and the platinum compound aqueous solution; b) preparing a solution by mixing a surfactant and optionally a co-surfactant in water, heating to complete solution, preferably at the same melting temperature of the lipid used in a) and adding a co-surfactant; c) dispersing the microemulsion obtained in a) into the solution obtained in b) obtaining a multiple microemulsion c); d) dispersing the microemulsion obtained in c) in aqueous medium at a temperature ranging from 0.5°C to 4°C obtaining a dispersion of solid lipid microspheres; e) washing with aqueous medium through ultrafiltration the obtained lipid microspheres obtained in d) and lyophilizing, optionally in the presence of a bulking agent and of a cryoprotecting agent.



WO 2005/092298 A1